

Appl. No. 10/773,733
Response to OA dated Feb 11, 2008
Date of Response: Aug 11, 2008

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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-9. (Cancelled)

10. (Currently amended) The spacer grid (10) according to claim 9 15, wherein the vertical support part (51) is bent at two steps along substantially horizontal bending lines, and the fuel rod support part (52) is equiangular with the fuel rods (125), whereby a uniform contact pressure distribution is provided between the fuel rod support part (52) in contact with the fuel rods (125).

11. (Currently amended) The spacer grid (10) according to claim 9 15, wherein each of the intermediate unit strips (40') has a coolant flow guide vane (57) and a guide tap (58) on an upper edge thereof such that a plurality of coolant flow guide vanes (57) and a plurality of guide taps (58) are alternately arranged along an upper edge of each of the intermediate unit strips (40'), and each of the unit corner strips (40") having either a coolant flow guide vane (57) or a guide tap (58) on an upper edge thereof to complete an alternate arrangement of the coolant flow guide vanes (57) and the guide taps (58), in cooperation with the intermediate unit strips (40').

12. (Previously presented) The spacer grid (10) according to claim 11, wherein each of the plurality of intermediate unit strips (40') has two guide taps (58) projecting downward at both corners on a lower edge of each of the intermediate unit strips (40'), and each of the plurality of unit corner strips (40") has a guide tap (58) projecting downward on a lower edge of each of the unit corner strips (40").

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13. (Previously presented) The spacer grid (10) according to claim 11, wherein each of the coolant flow guide vanes (57) is bent toward a center of the spacer grid (10), with a width of each of the guide vanes (57) reducing from a position at which each of the guide vanes (57) is initially bent, each of the guide vanes (57) has a tapered shape, with a peak of each of the guide vanes (57) being rounded.

14. (Previously presented) The spacer grid (10) according to claim 11, wherein each of the guide tabs (58) is bent toward the center of the spacer grid (10), and is rounded at a bent tip thereof to form an arc-shaped edge.

15. (Currently amended) ~~The spacer grid according to claim 9~~ A spacer grid (10) for placing and supporting a plurality of longitudinal fuel rods (125) in a nuclear reactor fuel assembly, comprising a plurality of inner strips (30) intersecting each other to form a plurality of guide tube cells (15) to receive guide tubes (13) therein and a plurality of fuel rod cells (26) to receive the fuel rods (125) therein, with a plurality of mixing blades (27) projecting upward from the inner strips (30) at intersections of the inner strips (30); and a plurality of perimeter strips (40) each of which comprises a plurality of unit strips including intermediate unit strips (40') and corner unit strips (40"), the perimeter strips (40) encircling the intersecting inner strips (30), and the corner unit strips (40") forming outermost corner cells of the spacer grid (10), with a grid spring (50) provided on each of the unit strips (40', 40"), the grid spring (50) comprising:

a vertical opening (53) formed at a central area of each of the unit strips;

a vertical support part (51) extending vertically in the vertical opening (53) from central portions of top and bottom edges of the vertical opening (53) ; and
a fuel rod support part (52) provided at a central portion

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of the vertical support part (51), the fuel rod support part (52) being bent to have equiangular surface contact with a fuel rod supported by the grid spring, further comprising inner grid springs on the inner strips, wherein the inner grid springs comprise an opening formed in the inner strips, an inner support part extending in the opening between edges of the opening, and an inner fuel rod support part provided on the inner support part, the fuel rod support part being bent to have an equiangular support surface which is equiangular with a fuel rod supported by the grid spring, wherein the vertical support part and the inner support part are different in structure.

16. (Previously presented) The spacer grid according to claim 15, wherein the vertical support part has a higher spring strength than the inner support part.

17. (New) The spacer grid according to claim 15, wherein the vertical support part and the inner support part have a different geometry.

18 (New) The spacer grid according to claim 15, wherein the vertical support part and the inner support part have a different shape.

19. (New) The spacer grid according to claim 15, wherein the vertical support part has a greater spring constant than the inner support part.

20. (New) The spacer grid according to claim 15, wherein the fuel rod support parties connected to the vertical support part at top and bottom edges, and wherein the inner fuel rod support part is connected to two spaced inner support parts at side edges.